

# USER'S MANUAL

## ORVALDI 1000VA/1500VA/2000VA/3000VA

192321362000002

### IMPORTANT SAFETY INSTRUCTIONS

#### SAVE THESE INSTRUCTIONS

This manual contains important safety instructions. Please follow all instructions carefully during installation. Read this manual thoroughly before attempting to unpack, install or operate.

**CAUTION-** To prevent the risk of fire or electric shock, install in a temperature and humidity controlled indoor area, free of conductive contaminants.

**CAUTION-** Risk of electric shock, do not remove the cover. No user serviceable parts. Refer servicing to qualified service personnel.

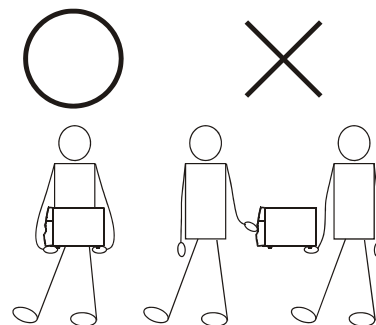
**CAUTION-** Risk of electric shock, hazardous live parts inside this UPS can be energized from the battery supply even when the input AC power is disconnected.

**CAUTION-** Risk of electric shock, Battery Circuit is not isolated from AC input; hazardous voltage may exist between battery terminals and ground. Test before touching.

**WARNING-** This is a Class A-UPS Product. In a domestic environment, this product may cause radio interference, in which case, the user may be required to take additional measures.

**NOTICE-** The UPS is designed to be for use with computer loads only.

**NOTICE-** To prevent injury, do not carry with the handle of front cover when moving the UPS.

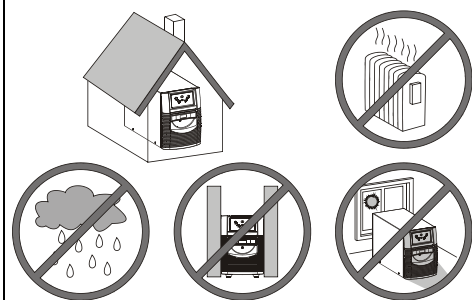


### SETUP

#### 1 Inspection

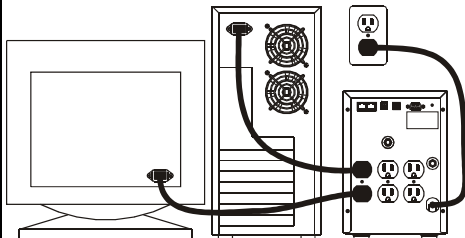
Inspect the UPS upon receipt. Notify the carrier and dealer if there is damage. The package is recyclable; save it for reuse or dispose of it properly.

#### 2 Place the UPS properly



#### 3 Connect the loads

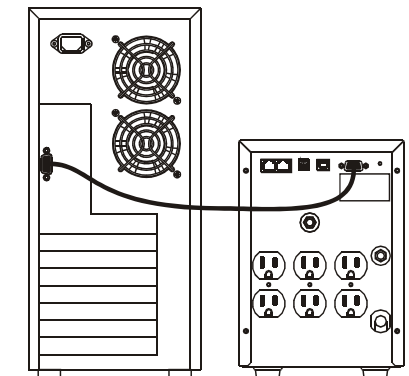
First, connect the UPS with Utility, then plug the loads into the outlets on the rear of the UPS. To use the UPS as a master "On/Off" switch, make sure that all of the loads are switch "On". These UPS outlets provide battery power and surge protection to the equipment when utility voltage is outside acceptable limits.



**Caution:** Do not connect a laser printer to the UPS outlets.

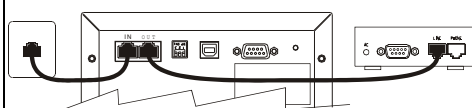
#### 4 Connect Computer Interface Port

Connect the supplied interface cable (RS-232 or USB, Optional) to the interface port on the rear of the UPS and the computer interface port. See software installation guide in the CD-ROM (Optional) for installation purpose.



#### 5 Connect Network Surge protection

Connect a 10 base-T / 100 base-T network cable into the RJ-45 network surge protection "IN" jack on the rear of the UPS. Connect from the "OUT" jack with network cabling to network equipment.



#### 6 UPS Start Up

1. Connect the UPS to the wall receptacle.
2. Push the "On" Switch on the front panel of the UPS until 4 LEDs (LCD) are lit then extinguished and release the "On" Switch.
3. The Backup mode LED (Amber) lights up and the UPS is under self-test mode now. If Utility is normal, the UPS will run under Utility mode (Green LED) after its self-test is complete. On the contrary, the UPS will run under Backup mode and the buzzer alarms every 2 seconds in case of blackout or over/under voltage.

##### Caution:

1. The UPS "On" will not be executed if the above procedure is not done completely, which means the button is released before all 4 LEDs (LCD) are extinguished.
2. The UPS will remain at "NO" output, if the start-up operation is not proceeded properly even though the Input Power Cord is connected to the wall receptacle.

##### IMPORTANT NOTICE:

Plug the UPS into the wall receptacle to charge the UPS for over 8 hours after initial installation.

##### STORAGE:

Store at -15 to +30 ° C (+5 to +86 ° F), charge the UPS battery every six months.

Store at +30 to +45 ° C (+86 to +113 ° F), charge the UPS battery every three months.

## Operation Test

### Turn Off the UPS

Push the "Off" Switch for at least 3 seconds to turn off the UPS. If you press the "Off" Switch less than 3 seconds, the UPS will not execute shutdown command due to insufficient pressing time.

In some occasions, the UPS will shut itself down in case of overload, output short-circuited or battery cutoff point reached in the Backup mode. The UPS will automatically shut off the output and beep for 5 seconds then completely shut itself down.

### Plug-in Charge

If the Input Power Cord is connected to the wall receptacle properly and the utility is normal, the UPS will start to charge automatically without processing "Turn On" procedure. You have to charge for at least 8 hours every 3 months to avoid from battery self over-discharge naturally, if the UPS is in an idle condition.

### Auto-Restart

The UPS will automatically restart to provide energy to the output if the utility recovers in 24 hours after battery cut. The "Backup LED" will flash every 5 seconds under the waiting situation. On the contrary, the UPS will not auto-restart if the Utility doesn't recover within 24 hours. You are required to start up the UPS manually. If you don't need UPS auto-restart, you can turn off the UPS by proceeding the "Turn Off" procedure.

### Alarm Silence

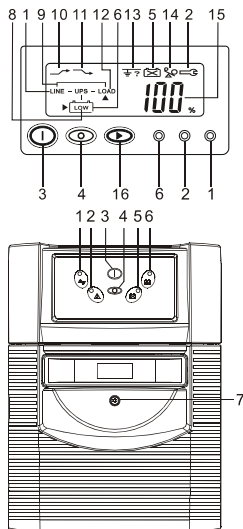
The Alarm might be turned off by pushing the "On" Switch for approximately 1 second in the "Backup" mode. Unless any other warning or fault condition occurs, the alarm remains at Silence condition once the "Alarm Silence" is turned off.

### Test

Under Utility Normal condition, push the "On" Switch for 3 seconds to execute the Battery Self-test function. In case the battery is normal, it will enter into Battery Backup Mode for 10 seconds then return back to Utility Mode. If the battery voltage is detected lower than set limit, the Battery Replacement LED will blink for 5 seconds then extinguish to stop self-test procedure. And if battery is detected weak or dead, the Battery Replacement LED will steadily illuminate.

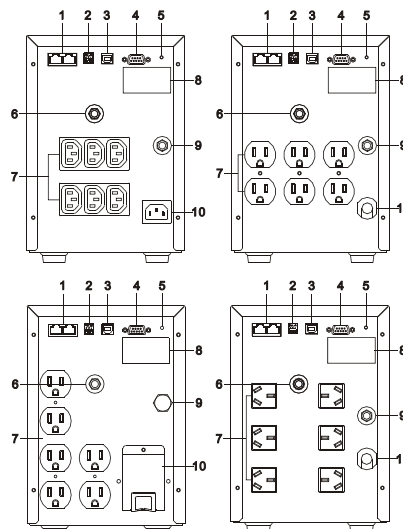
## FRONT PANEL EXPLANATIONS

1. Utility LED
2. Fault LED
3. On Switch
4. Off Switch
5. Battery Replacement LED
6. Battery Backup LED
7. Screw for Easy Swappable Battery Cover
8. Battery Low
9. Bypass
10. Utility Low, UPS Boost
11. Utility High, UPS Buck
12. UPS Output Indicator **LOAD**
13. Polarity Error or Ground Fault
14. Over load
15. Load/Battery Level(%)
16. Load/Battery Level Indication Control Button



## REAR PANEL EXPLANATIONS

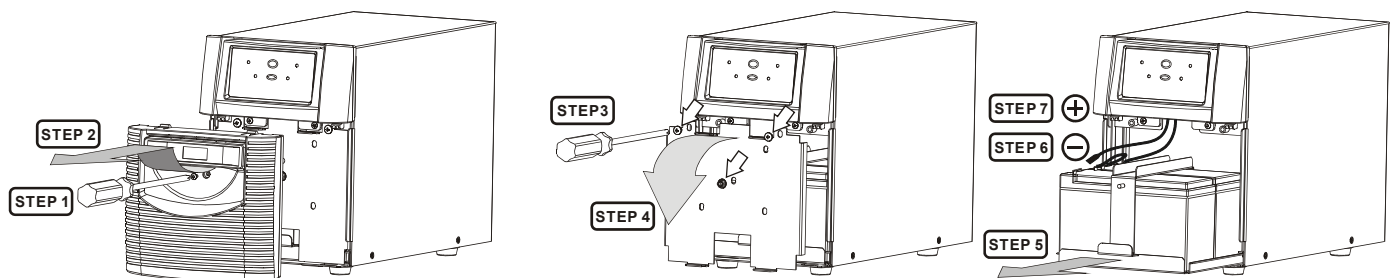
1. RJ45 Port
2. DIP Switch
3. USB Communication Port
4. RS232 Communication Port
5. Internal CPU Reset Button (press to shutdown)
6. Output Breaker
7. Outlet
8. Rating Label
9. Input Fuse
10. Input Power Cord(Inlet)



## REPLACING THE BATTERY

**Note: Once the battery is disconnected, the loads are not protected from power outages.**

When the Battery Replacement LED(Red) lights up, you may leave the UPS to be re-charged for at least 8~10 hours to see whether the Red LED will be extinguished after the Self-test Function is executed again. In case the Red LED remains unchanged, you may unscrew the Easy Swappable Battery cover, replace a new battery than push the "On" Switch to disable the RED LED. Please follow the steps 1-7 to replace the new battery



## DIP SWITCH SETTING

The voltage & frequency of the UPS might be re-set by the DIP Switch on the rear panel of the UPS. The following charts may bring you clear pictures about how the settings are done by the DIP Switch.

FUNCTION	3	2	1
VOLTAGE=110V	↑	↓	↓
VOLTAGE=115V	↓	↓	↓
VOLTAGE=120V	↓	↑	↓
DC START 50Hz			↑
DC START 60Hz			↓



FUNCTION	3	2	1
VOLTAGE=220V	↑	↓	↓
VOLTAGE=230V	↓	↓	↓
VOLTAGE=240V	↓	↑	↓
DC START 50Hz			↑
DC START 60Hz			↓



## INDICATORS & ALARMS

Indicator	Color	Description	Alarm
Utility Mode 	Green	<b>Steady:</b> Output Load is supplied by Utility. <b>Blinking:</b> Polarity error or Ground Fault	None
Backup Mode 	Amber	<b>Steady (with alarm):</b> Output Load is supplied by Battery <b>Blinking every 5 seconds(no alarm):</b> Stand by for Utility recovery to re-start up	Every 2 seconds before battery Low and every 1 second before battery Cutoff.
Fault 	Red	When Overload, short circuit, or Output Voltage Abnormal occurs	Buzzer beeps continuously.
Battery Replacement 	Red	<b>Blinking:</b> Battery is weak and needs to be recharged. <b>Steady:</b> Battery is dead	None